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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,821

08/23/2005

Eiji Toda

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER

MCGOWAN, JAMIE LOUISE

ART UNIT

PAPER NUMBER

3671

MAIL DATE

DELIVERY MODE

06/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,821	Applicant(s) TODA ET AL.	
	Examiner JAMIE L. MCGOWAN	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/31/05, 6/4/07, 5/28/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 7 recites the limitation "from operation position detecting means" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by JP2003184134 to Toda (cited by applicant).

Regarding claim 1, Toda discloses an apparatus and a method for controlling a hydraulic pump for a work machine of a working vehicle having a cylinder and a hydraulic pump (26) for supplying predetermined pressure oil to said cylinder comprising the steps of:

- Measuring a duration time of a state in which a hydraulic pressure (at pressure detector (45)) in a bottom side of at least one cylinder of said cylinder is at a predetermined value or less
- Determining that an excavating operation starts when a predetermined duration time elapses and thereafter, the hydraulic pressure in said bottom side exceeds the predetermined value
- Setting a displacement (using displacement control device (41)) of said hydraulic pump (26) at a predetermined displacement reduced to be smaller than a maximum displacement

- Performing a control (with controller (50)) to reduce the displacement of said hydraulic pump to the predetermined displacement

(See Abstract of Toda)

3. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP2003184134) (cited by applicant) as applied to claim 1 above, and further in view of Izumi (EP0462589) (cited by applicant).

Regarding claims 2 and 7, Toda discloses the device as described above, but fails to specifically disclose the step/device for determining that the excavating operation is finished. Like Toda, Izumi also discloses a system/apparatus for controlling a hydraulic pump of an earth working vehicle. Unlike Toda, Izumi further discloses a load sensing hydraulic drive circuit that reduces the displacement of the hydraulic pump to the predetermined value when the load is no longer sensed (the load would not be present if the machine were pushing a pile of material in a forward direction and then moved into a neutral or reverse direction). Izumi teaches that using a load sensing hydraulic drive circuit allows for more efficient operation of the system because the hydraulic pump is controlled dependent on the load pressure and is not required to use all of its energy when the load is small or non existent. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the load sensing system of Izumi in the apparatus/method of Toda to provide a more power efficient system.

4. Claims 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP2003184134) (cited by applicant) as applied to claim 1 above, and further in view of Takeuchi (DE3823283) (cited by applicant).

While Toda discloses the device as described above, it fails to specifically disclose a step/apparatus of determining that the excavating operation is finished when the load on the bottom side is reduced and then reducing the displacement of the pump when it is so determined that the excavating operation is finished. Like Toda, Takeuchi also

Art Unit: 3671

discloses a control system for a variable displacement pump. Unlike Toda, Takeuchi further discloses that when there is a pressure change, a detection mechanism signals the pump to increase or decrease its displacement based on the given condition after a predetermined time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the pump displacement control of Takeuchi to determine when the excavating operation is finished in order to run more efficiently by using less power when no load is sensed.

5. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP2003184134) (cited by applicant) as applied to claim 1 above, and further in view of Duell et al. (6,312,209).

While Toda discloses the device as described above, it fails to disclose a bucket height detector for detecting the height of the bucket to determine when excavation has ended. Like Toda, Duell et al. also discloses a control system for a variable displacement hydraulic pump. Unlike Toda, Duell et al. further discloses using a height sensor to increase and decrease the displacement of the pump. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the height sensor of Duell et al. in the device of Toda to determine when the excavating operation is finished in order to run more efficiently by using less power when no load is sensed.

Allowable Subject Matter

6. Claim 11 allowed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE L. MCGOWAN whose telephone number is

Art Unit: 3671

(571)272-5064. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571)272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas B Will/
Supervisory Patent Examiner
Art Unit 3671

JLM
June 19, 2008